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FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY**XtremeSpectrum Inc.****FOR IMMEDIATE RELEASE**  
July 16, 2001**MEDIA CONTACT:**  
Scott Warner  
703-744-7824  
[swarner@qorvis.com](mailto:swarner@qorvis.com)**Statement of Martin Rofheart, CEO of XtremeSpectrum, on  
the Opposition of Ultra-Wideband Technology**

On July 13, 2001, XtremeSpectrum responded, via the attached letter, to the claims made to members of the Bush Administration by the Air Transport Association of America, Inc. (ATA) and others opposing the FCC's approval of ultra-wideband (UWB) technology.

Contrary to the views expressed by ATA et al., well-designed and properly regulated UWB communications devices do not threaten interference to safety-of-life or any other services. Proposed UWB emissions limits are the same as noise levels for a personal computer - except at sensitive frequencies, where they are greatly reduced. These limits, together with further controls proposed by XtremeSpectrum, eliminate any realistic possibility of harmful interference.

UWB is the only viable technology to provide low-power, extremely fast/high data rate connections for battery-powered consumer products. To that end, the "unified Administration position" called for by ATA et al., should be only that the FCC move quickly to issue rules that ensure that Americans have access to one of the most significant breakthrough technologies in wireless broadband communications in the last ten years.

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**\*\*Letter Attached\*\***No. of Copies rec'd 1  
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July 13, 2001

The Honorable Donald L. Evans  
Secretary of Commerce  
Department of Commerce  
The Herbert Hoover Building  
14<sup>th</sup> Street & Constitution Avenue, NW  
Washington, DC 20230

The Honorable Donald H. Rumsfeld  
Secretary of Defense  
Department of Defense  
The Pentagon  
Washington, DC 20301

The Honorable Norman Y. Mineta  
Secretary of Transportation  
Department of Transportation  
400 Seventh Street, SW  
Washington, DC 20590

The Honorable Daniel S. Goldin  
Administrator  
National Aeronautics and Space Administration  
Two Independence Square  
300 E Street, SW  
Washington, DC 20546

**Re: Pending FCC Rulemaking (ET Docket 98-153) on Ultra-Wideband Transmission Systems**

Dear Secretary Evans, Secretary Rumsfeld, Secretary Mineta, and Administrator Goldin:

By this letter, XtremeSpectrum, Inc. (XSI) responds to the letter addressed to you on July 6, 2001 by Air Transport Association of America, Inc. and 38 other signatories (ATA *et al.*) Those parties oppose

FLETCHER, HEALD & HILDRETH, P.L.C.

Secretary Evans, Secretary Rumsfeld, Secretary Mineta and Administrator Goldin  
July 13, 2001  
Page 2

the FCC's approval of ultra-wideband (UWB) technology, which uses extremely low-level signals across a wide range of spectrum. XSI conducts research in UWB communications applications, and expects to become a manufacturer upon FCC approval. XSI takes no position on UWB radar systems.

ATA *et al.* assert that UWB systems threaten radio interference in the frequency bands used by defense, safety-of-life services, and the Global Positioning System (GPS), as well as commercial licensees such as Personal Communications Service (PCS) and Digital Audio Radio Service (DARS). Such concerns would indeed be grave, were they well founded. But ATA *et al.* has exaggerated the threat UWB poses to other spectrum users. ATA *et al.* reached its alarming results in part by citing the results of tests on categories of UWB equipment that do cause interference — and which XSI agrees should be prohibited.

Well-designed, properly regulated UWB will not cause interference to GPS, PCS, DARS, or any other federal or commercial system addressed in the FCC proceeding.

Equally important, UWB technology will make possible a communications technology that is fast, inexpensive, battery-efficient, safe, and reliable over short distances. One predecessor technology, spread spectrum wireless LAN, is now a \$2 billion/year industry and still growing at 30-40 percent. We expect UWB to make at least a comparable contribution to the Nation's economy.

Low UWB EMISSION LEVELS

ATA *et al.* fail to mention the remarkably low levels of UWB emissions. Over much of the spectrum, the FCC has proposed UWB levels equal to the permitted radio noise levels from an ordinary personal computer (in FCC terminology, the "Class B limits"). This is equivalent to 75 billionths of a watt, measured across a megahertz of spectrum. At frequencies below 2 GHz, where GPS and PCS operate, the FCC proposes to reduce those emissions even more, by 94 percent, to under 5 billionths of a watt.

XSI, however, proposed the lower levels shown below, to provide extra assurance of no harmful interference. These levels are fully supported in the test data cited by ATA *et al.*:

above 2.7 GHz:	FCC Class B (75 nanowatts)
2-2.7 GHz (DARS, MMDS/TIFS):	1/4 of Class B levels (19 nanowatts)
1.6-2 GHz (PCS):	1/16 of Class B levels (5 nanowatts)
below 1.6 GHz (GPS):	1/64th of Class B levels (1 nanowatt)

In engineering terms, the reductions below 2.7 GHz are 6 dB, 12 dB, and 18 dB, respectively. These are all unintentional emissions, outside the frequencies carrying 97% of the signal energy. These levels, particularly in the GPS band, are so low that they are difficult to measure, because the personal computers